

**PACIFIC DRY DOCK
AND REPAIR COMPANY**
A Crowley Company



Ltr 82-49

Brian *BF*
Jack *8/17*
Jim *—*

June 17, 1982

U.S. Department of the Interior
National Park Service
Golden Gate National Recreation Area
Fort Mason, San Francisco, Calif. 94123

Attention: Charles Baerlin *CB*

Dear Sir:

In accordance with paragraph 35 of our Special Use Permit No. 4-8140-0543 we have had a Condition Survey completed on the AFDL-38.

A copy of the survey is enclosed for your records.

Sincerely,

PACIFIC DRY DOCK & REPAIR CO.

R. G. Hartsock

R. G. HARTSOCK,
General Manager

RGH/cje

Encl:1

321 Embarcadero
Oakland, California 94606
(415) 893-7020

VM
615
A4H8
1982



HULL AND CARGO SURVEYORS, INC.
INLAND MARINE - INSPECTIONS - LOSS PREVENTION - SHIP & AIR CARGO
100 PINE STREET, SAN FRANCISCO, CALIFORNIA 94111
TEL. (415) 362-3791

June 4, 1982

SFH 82014
Pacific Dry Dock
Dry Dock Yard #2

On April 7, 1982 and May 26, 1982 the undersigned surveyed condition of the floating dry dock at yard #2, Oakland, California.

General

Dry dock was built for U.S. Navy by Tidewater at Norfolk, Virginia in 1944. Dimensions are 389' x 84' x 40' from hoseline to wingwalls. Hull pontoon is 14' deep with 1'6" protrusions on bottom for discharge pump sumps.

Maximum depth over keel blocks is 18' and certified capacity is 2800 long tons. Maximum draft at full submergence is 37' plus 1'6" for sumps. Light displacement is stated to be about 7900 long tons.

Hull is divided into 9 w/t areas. There are 4 tanks p/s plus a cross passageway connecting the two wing walls. The 4 rake tanks have valves connecting them to the end tanks on each end p/s. These valves however are presently inoperable in open position making rakes continuous with next tanks.

There are 8 pumps, one for each main tank. These are 16 inch "deep well" pumps with electric motors in the pump rooms. Pump rooms are isolated 2 each side at bottom of wing wall level.

Centerline longitudinal blkhd. is continuous except in way of thwartships passage.

IN ACCEPTING THIS REPORT OR INSTRUMENT IT IS AGREED THAT THE EXTENT OF THE OBLIGATION OF THIS FIRM WITH RESPECT THERETO IS LIMITED TO FURNISHING A SURVEYOR BELIEVED TO BE COMPETENT, AND IN THE MAKING OF THIS REPORT OR INSTRUMENT THE SURVEYOR IS ACTING ON BEHALF OF THE PERSON, COMPANY AND/ OR FIRM REQUESTING THE SAME AND NO LIABILITY SHALL ATTACH TO THIS FIRM FOR THE ACCURACY, ERRORS AND OMISSIONS THEREOF.

Bilge blocks on main decks are chain moved from top of wingwalls. Keel blocks on centerline are 4' x 4' at 8' intervals.

Wingwalls originally were used for quarters, shops and storage areas. Presently, only the pump rooms are used. Dock used to be self contained with diesel generators for pumps, lights, welders, etc.

On top of each wingwall is a model 2000 Manitowoc whirly crane mounted on a gantry. Each crane is rated at a max. load of 11 tons at 20' radius. Crane power is Cummins 6 cylinder diesel with direct drive on hoists and topping lift plus a PTO drive D.C. generator for swing and gantry motors.

Pump and valve control is centralized in a control room on top of stbd. wing wall. Also located here are pneumerators for tank water levels and draft fore and aft, p/s.

Conditions

Overall, dock is in fair to good condition. Minor pitting noted in concrete, mainly on wing walls. Individual pits range up to 2 inches deep by 6-8" across. Most are much smaller, no more than $\frac{1}{2}$ " deep. In a very few cases of deeper pitting, some rebar is exposed.

Blocks are generally in fair condition consistent with service in being rebuilt for various vessels. Chains and sheaves for bilge blocks show considerable wear and corrosion.

Bottom of dock is cleaned periodically but abrasive from sandblast inevitably accumulates.

Upper Wing Walls

Cranes on both sides are roughly in the same condition. Neither one is in even fair condition. Metalwork in cabs is badly rusted, in fact has holes through the top on both cranes.

Electrics are very poor with insulation ragged, resistor banks corroded and generators in poor condition. Much wear noted on draw works and bull gears. Cables are renewed regularly but drums, bearings, frictions etc, are in bad shape.

Virtually a complete rebuild including new prime movers is strongly recommended to restore these units to good condition.

Control room is operational but pneumercators are at best questionable. Valve and pump controls also should be disassembled, checked and renewed as necessary.

Pump Rooms

It is noted that valves have spare units to allow replacement and rebuild at leisure. Pumps, on the other hand, have no spares and a failure shuts down the whole dock until repairs can be made.

It is recommended that a spare unit including housing, bearings, rotor, motor and controls be provided to allow planned preventive maintenance on a regular exchange basis.

Pumps (lower ends) show considerable corrosion. This is necessarily a factor in deep pumps operating in salt water. A replacement program would allow better care of these units.

Valves

Motor operated flood and discharge valves noted fair. These units have spares and are regularly exchanged and renewed.

Manual valves to rake compartments are corroded solidly in open position. These should be renewed and made operational in case of necessity (a hole in a rake compt.).

Hull

Major problem noted inside tanks is condition of ladders. All steel ladders are wasted completely off in lower 2 feet. Some ladders are

also poorly secured at hatch coamings. This is a dangerous item for personnel injury and/or rescue if anything should happen. All ladders should be renewed.

Concrete inside tanks is generally in excellent condition. No signs noted of spalling of deterioration. Slight (3"-6") accumulation of mud noted in some areas inside tanks.

Only concrete problem noted was some tension cracking in bulkheads and main deck in way of centerline blkhd. This is due to loading characteristics along hull blocks. Considerable salting noted in way of cracks but little rust bleed. However it is probable that these cracks penetrate to rebar and it would be advisable to pump cracks with epoxy to preserve the rebar and extend life of the dock.

Summary

Dock is in quite reasonable condition considering age and service. Noted deficiencies can and should be alleviated to extend useable life but are not felt to be of immediate consequence outside of cranes and ladders.

Since these pumps are a relatively standard item, it should be possible to find a complete spare unit and allow a regular maintenance program.

Estimated Value

Replacement:	\$ 15,000,000.00
ACV:	\$ 1,500,000.00

HULL AND CARGO SURVEYORS, INC.

Robert A. Wehnau
Robert A. Wehnau

RAW:mab

Requested by: R. Hartsock, Pacific Dry Dock

RECEIVED

JUN 11 1982

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REPAIR CO.

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